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Intervention

Implementation and effectiveness of a hospital smoking cessation service in Germany

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ABSTRACT

Objective: Hospitalized smokers are often highly motivated to quit and receptive to assistance. There are few published accounts of hospital-based smoking cessation programmes implemented outside of a trial setting, particularly outside North America. We describe the implementation and effectiveness of a dedicated smoking cessation service in Freiburg, Germany.
Methods: Measures of implementation (e.g. number of patients referred and consenting to participate, receipt of post-discharge support) and effectiveness are presented.
Results: In the first 2 years of the service, 1432 patients were referred. Over half (55.3%) of counselled smokers agreed to participate. Sustained abstinence for 6 months was achieved by 28.0% (missing cases coded as smokers), whereas 7-day point prevalence rates were between 30 and 35% at 3, 6 and 12 months. Those who received 4+ post-discharge calls were more likely to achieve sustained abstinence, as were older smokers, those with higher self-efficacy, and cardiovascular patients.
Conclusion: Hospitalized patients in Germany are receptive to the offer of bedside counselling and to phone support post-discharge, and success rates are comparable to those achieved in other countries.
Practice implications: The findings argue strongly for the routine identification of smokers upon hospital admission, and the availability of cessation support both during hospitalization and following discharge.

1. Introduction

Quitting smoking has both immediate and long-term health benefits for men and women of all ages, reducing risks for smoking-related disease and improving health in general [1]. The Framework Convention on Tobacco Control, the world's first international public health treaty, emphasizes the role of health care systems in providing accessible and affordable tobacco dependence treatment [2].

Hospitalization is a potentially powerful 'teachable moment' in which smokers are often motivated to quit and receptive to assistance due to concerns about their health [3]. Moreover, they are removed from their normal smoking cues, are encouraged to be abstinent by hospital smokefree policy, and have access to health professionals to provide advice and support. A systematic review by Rigotti et al. [4] confirmed that hospital smoking cessation counselling is effective, but stressed the importance of ensuring that treatment extends beyond the hospital stay. In 25 trials where tobacco dependence treatment began during hospitalization and extended for a month after discharge via supportive contacts (typically via telephone), a statistically significant increase in quit rates over usual care was found (RR 1.37, 95% CI 1.27–1.48).

As noted by Rigotti et al. [4], there is a need for demonstrations of the feasibility and effectiveness of hospital-initiated smoking cessation interventions in routine practice (i.e., outside of a trial setting). Few such studies have been conducted in mainland Europe; Germany is typical of this region in that it has a high smoking prevalence [5], and few effective policies implemented to control tobacco use [6]. Thus, the challenges associated with implementation may differ from programmes in the United States or Canada where smoking prevalence is lower and hospital-based tobacco dependence treatment is more commonplace.

In this paper, we present data on the implementation and effectiveness of the Präventionsteam (PT), a dedicated smoking cessation service at the Universitätsklinikum (University Medical

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Centre) in Freiburg, Germany. We describe PT and its implementation, characteristics of counselled patients, uptake of recommended cessation assistance, and report abstinence rates achieved at follow-ups 3, 6 and 12 months after the completion of a schedule of post-discharge telephone support. In addition, we explore predictors of use of cessation assistance, receipt of post-discharge support, and cessation outcome.

2. Methods

2.1. Setting and participants

PT is part of the Comprehensive Cancer Centre Freiburg (CCCF), in turn a part of the Universitätsklinikum, the largest hospital in the southern German state of Baden-Wuerttemberg. Smoking is banned indoors within the Universitätsklinikum, but is allowed in designated areas outside. Prior to the establishment of PT, neither structured counselling of smoking patients nor post-discharge support was offered. Information on community-based interventions and national quitlines was available via leaflets, but patients had to proactively ask for it.

Smokers or recent ex-smokers are typically referred to PT by their treating physician or nurse. All adult (18+ years) smokers are eligible to receive counselling, except those with substance abuse or psychiatric co-morbidities, who often require close supervision during a quit attempt considered beyond the capacities of the counsellors to provide. Patients included in this evaluation were recruited between April 2009, when PT was piloted in two departments, and July 2011. The number of participating departments increased to 27 of 28 departments with adult inpatients by mid-2010.

Staff training sessions were held in each department to inform health professionals of the service, how to refer patients, and of the importance of treating tobacco dependence and the effectiveness of cessation assistance. Further training sessions to maintain awareness and motivation to refer were scheduled or requested if a department required additional assistance. Posters and flyers also increased recognition of PT among staff and patients.

2.2. Description of PT and the intervention

PT is staffed by a core team of three counsellors trained as tobacco treatment specialists at the Mayo Clinic, Rochester U.S.A. and/or Universität Tübingen, Germany. The aims are to provide bedside smoking cessation counselling, inform smokers of and link them to evidence-based treatment, and to provide structured ongoing support by phone after they leave the hospital.

As soon as possible following referral, bedside counselling takes place (30–60 min). Patients' current interest in quitting is assessed, and Motivational Interviewing [7] techniques are employed to motivate those ambivalent about quitting. Patients are encouraged to formulate a treatment plan, which typically involves selecting an evidence-based behavioural or pharmacological treatment [8]. Recommendations for treatment are made in accordance with the principle of 'shared decision-making' [9], taking into account each patient's level of nicotine dependence, their illness and treatment, and their capacities and wishes. Patients with moderate to high nicotine dependence, or who report experiencing severe withdrawal symptoms, are provided with free medication (usually the nicotine patch) during their inpatient stay, if not contraindicated. Those who wish to access face-to-face counselling are referred to a provider from a regional network of 70 therapists established and maintained by PT. Providers in the network are required to have suitable qualifications and to offer therapy (typically weekly group sessions for 3–6 weeks) in accordance with published guidelines for smoking cessation [10].

The post-discharge calls are scheduled according to patient need, potentially continuing for up to 3 months at approximately weekly intervals. The calls end prematurely if the patient can no longer be contacted, requests no further contact, or the counsellor determines that further contact would confer no additional benefit (this rarely occurred until late in the call schedule). As far as possible, to maintain continuity of care, the same counsellor who provided the bedside counselling offers the post-discharge telephone support. The calls are of 5–10 min duration and semi-structured, focusing on providing motivational support and encouraging use of the patient's chosen form of cessation assistance. First, the counsellor assesses smoking status, abstinence violations, medication and/or therapy use, withdrawal symptoms, and confidence to stay quit (or make a quit attempt). Following this, the focus varies depending on the patient's progress and reported concerns. Principles of Motivational Interviewing are used, as well as recommended behavioural strategies [11,12]. In case of a relapse, the counsellor analyses problematic and helpful circumstances, reviews coping strategies, and encourages the patient to set a new quit date. Handling, application and dosage of stop-smoking medication are discussed if relevant. Lastly, future issues are anticipated (e.g., the need to confront former smoking situations).

Written consent to receive post-discharge phone support, to have contact details referred to a therapist (if relevant) and to be contacted for research follow-up is secured during the initial bedside counselling session. Ethical approval for the collection of patient data was granted by the Ethik-Kommission of the Albert Ludwigs Universität Freiburg, reference number 200/09.

2.3. Measures

2.3.1. Baseline data

The referral form included data on age, gender and (usually) primary reason for hospitalization. Following counselling, measures of nicotine dependence, motivation to quit, self-efficacy, number of previous quit attempts, current or planned use of cessation assistance, and age started smoking were collected. Patients also described their previous experience with cessation assistance, and listed their reasons for quitting, available resources and perceived barriers, with this information used to inform the post-discharge support. Nicotine dependence was measured by the Fagerström Test for Cigarette Dependence (FTCD) [13,14]. To measure readiness to quit, patients were asked 'Are you seriously planning to quit smoking?' answered: (a) I have already stopped; (b) yes, after this consultation; (c) yes, tomorrow; (d) yes, in the next 30 days; (e) yes, in the next 6 months; and (f) I don't know yet. Motivation to quit was measured by 'How important is quitting smoking for you at this time?' and self-efficacy by 'How confident are you that you can stop smoking within the next 6 months?' both scored from 1 (not at all) to 10 (very). It should be noted that the measures of readiness to quit, motivation and self-efficacy were not true baseline measures, as they were likely to have been influenced by the counselling already received.

Reason for hospitalization was categorized into cancer, cardiovascular, pulmonary, internal medicine, gynaecology, ear/nose/throat, and other. Internal medicine included gastroenterology, nephrology, urology, neurology, skin diseases and eye infections. Diagnoses classified as 'other' included trauma from accidents, orthopaedic, dental, eye injuries, and one-off surgical procedures not otherwise classified. Reason for hospitalization was not known for 20 patients, while a further 6 who received counselling and post-discharge support were not hospital patients, but were relatives of patients who proactively asked for help while visiting.